

Serial No.: Unknown

a1
end

9. (Amended) Apparatus according to claim 1, wherein the main coil assembly (1; 1') comprises a plurality of superconducting main coils connected in series within a closed loop.

10. (Amended) Apparatus according to claim 1, wherein the main coil assembly (1; 1') comprises at least one coil wound in one direction and at least one other coil wound in the opposite direction.

11. (Amended) Apparatus according to claim 1, wherein the B0 shim coil assembly (2; 2') comprises a plurality of superconducting shim coils connected in series within a closed loop.

12

13. (Amended) Apparatus according to claim 1, wherein the B0 shim coil assembly (2; 2') comprises at least one coil wound in one direction and at least one other coil wound in the opposite direction.

14. (Amended) Apparatus according to claim 1, wherein at least one further shim coil assembly (29) is provided for adjustment of the degree of homogeneity of the central magnetic field.

Attached hereto is an Appendix which includes the above-noted changes in annotated form.

REMARKS

Claims 1-14 are pending in the application. Favorable consideration of the application, as amended, is respectfully requested.

Serial No.: Unknown

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

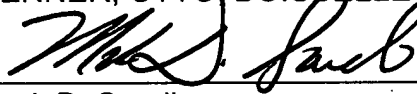
09914415.082704

Serial No.: Unknown

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

RENNER, OTTO BOISSELLE & SKLAR, LLP



Mark D. Saralino

Reg. No. 34,243

DATE: August 27, 2001

The Keith Building
1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

C:\154\MDS\MARS\IP124us\nonfee.amd.wpd.wpd

APPENDIX

IN THE CLAIMS:

Claims 3-11 and 13-14 have been amended as follows:

3. (Amended) Apparatus according to claim 1 [or 2], wherein the main coil assembly (1; 1'), the B0 shim coil assembly (2; 2') and the control means (31, 38) are adapted to compensate for the effect of time variation of the magnetic field within the working volume as a result of variation of the current flow in the main coil assembly with time.

4. (Amended) Apparatus according to claim 1, [2 or 3,] wherein the B0 shim coil assembly (2; 2') is constructed from a material having a critical current value, at which the B0 shim coil assembly would revert to the normal conducting state, which is significantly greater than the value of the current required to compensate for time variation of the magnetic field within the working volume.

5. (Amended) Apparatus according to [any preceding] claim 1, wherein the B0 shim coil assembly (2;2') incorporates at least one coil wound on the same former as at least one coil of the main coil assembly.

6. (Amended) Apparatus according to [any preceding] claim 1, wherein the auxiliary current supply means (6) incorporates a superconducting switch (4) including a heating element for heating the switch (4) to drive it out of its superconducting state to cause the current passing through the switch (4) to decay.

7. (Amended) Apparatus according to [any preceding] claim 1, wherein the main current supply means (5) incorporates a superconducting switch (3) including a heating element for heating the switch (3) to drive it out of its superconducting state to cause the current in the main coil assembly (1; 1') to decay.

8. (Amended) Apparatus according to [any preceding] claim 1, wherein the auxiliary current supply means (6) includes input terminals to which current is supplied under control of the control means (31) during initial energisation of the B0 shim coil assembly (2; 2'), such current supply to the input terminals being terminated when the current flowing in the closed loop has reached the desired level.

9. (Amended) Apparatus according to [any preceding] claim 1, wherein the main coil assembly (1; 1') comprises a plurality of superconducting main coils connected in series within a closed loop.

10. (Amended) Apparatus according to [any preceding] claim 1, wherein the main coil assembly (1; 1') comprises at least one coil wound in one direction and at least one other coil wound in the opposite direction.

11. (Amended) Apparatus according to [any preceding] claim 1, wherein the B0 shim coil assembly (2; 2') comprises a plurality of superconducting shim coils connected in series within a closed loop.

13. (Amended) Apparatus according to [any preceding] claim 1, wherein the B0 shim coil assembly (2; 2') comprises at least one coil wound in one direction and at least one other coil wound in the opposite direction.

Serial No.: Unknown

14. (Amended) Apparatus according to [any preceding] claim 1, wherein at least one further shim coil assembly (29) is provided for adjustment of the degree of homogeneity of the central magnetic field.

09914415-082701